EPJS

Extraction Parachute Jettison System

In normal cargo aerial delivery operations, the extraction parachute is deployed and the cargo pallet exits the aircraft.

A malfunction of this process of extracting palletized cargo during an in-flight delivery puts the aircraft and the safety of the entire crew at risk.

The capability of remotely jettisoning the high drag-producing extraction parachutes in the event of a cargo pallet exit malfunction is essential.

Currently, if a malfunction occurs the load-master must position himself at the ramp exit, between the cargo pallet and the extraction parachute main lines.

Once at that position the loadmaster must manually cut-away the extraction parachute main lines by hand. This is very dangerous because the cargo pallet load could break away and strike the loadmaster while the main extraction lines are being cut.

The FXC Extraction Parachute System (EPJS) concept has been developed to jettison malfunctioning parachutes remotely, quickly and safely.

The system requires no modification to the aircraft and only requires a 28 VAC power source. One EPJD (Extraction Parachute Jettison Device) is required for each cargo pallet.The DM-500 has been designed to fit into the existing M-21 mounting bracket, no modification required.

EPJS is qualified for use with C-17, C-130, C-5, C-141, and in qualification process with A400M, and Kawasaki C-2.

It will begin soon, its qualification process with Embraer KC-390.

The EPJS integrates (refer to diagram) the following major assemblies:

- **Extraction Parachute Jettison Device (EPJD)** - Couples the extraction line with the 3-pont link assembly. The EPJD contains a pyrotechnic squib that, when activated remotely by the Loadmaster, releases the main lines connected to the extraction parachutes (loads up to 42,000 lbs)
- **Y-Connector Mounting Box** - Is an electrical circuit and connection assembly that is the junction between the Loadmasters Control Box and the firing of the squib in the EPJD. It is secured to the floor rings of the aircraft and is adjustable with an extendable mounting tube. An LED signals power continuity and readiness to activate the EPJD squib in the LAMP TEST Mode. There is one Y-Connector Mounting Box for each cargo pallet. Operating the JETTISON Switch on the Control Box actuates the squib firing circuit in the EPJD via the Y-Connector Mounting Box.
- **Control Box** - Contains the Power switch, circuit breaker, LAMP TEST and guarded JETTISON switches. A dimmer adjust knob controls the brightness of the LED's on the Y-Connector Mounting Box.
- **Squib & Cable** - Is an electrically initiated gas generator mounted into the EPJD that when activated severs the main extraction line webbing.

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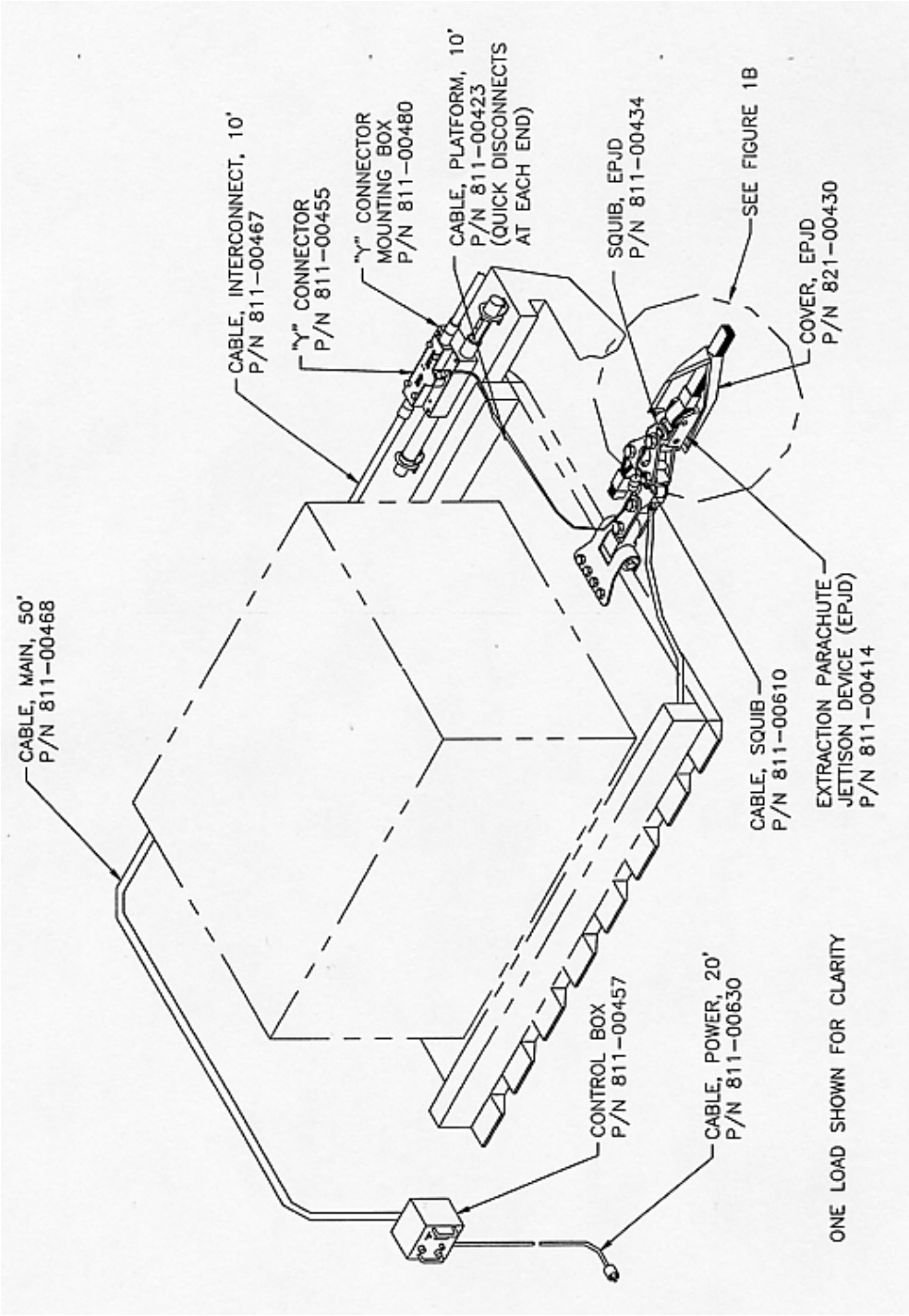
- **Cables** - Interconnecting electrical cables between the Y-Connector Boxes, the EPJD, and Control Box are provided. There is a Power cable that connects to the Control Box from the 28VAC aircraft power outlet.



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